UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,519	03/02/2004	Andrew E. Gruber	00100.01.0077	2773

29153   7590   07/02/2007

ADVANCED MICRO DEVICES, INC.
C/O VEDDER PRICE KAUFMAN & KAMMHOLZ, P.C.
222 N.LASALLE STREET
CHICAGO, IL 60601

EXAMINER
NGUYEN, VAN H

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
07/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 March 2004</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-25</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to the application filed 03/02/2004.

Claims 1-25 are currently pending in this application.

Oath/Declaration

2.   The Office acknowledges receipt of a properly signed Oath/Declaration submitted

03/02/2004.

Specification

3.   Examiner requests that Applicant review the application carefully for informalities

including typographical errors.

The disclosure is objected to because BRIEF SUMMARY OF THE INVENTION is

missing.

Descriptive Title Required

The title of the invention is not descriptive. The title should be as "specific as possible"
37 CFR 1.72 while not exceeding "500 characters in length". The title should provide
"informative value" and serve to aid in the "indexing, classifying, searching" and other

Official identification functions. A new title is required that is clearly indicative of the invention to which the claims are directed. MPEP606.01

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-25 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The claims do not fall within one of the four

enumerated categories of patentable subject matter recited in section 101 (process,

machine, manufacture or composition of matter).

Claims which are broad enough to read on statutory subject matter or on non-statutory

subject matter are considered non-statutory. Cf. In re Lintner, 458 F.2d 1013, 1015, 173

USPQ 560, 562 (CCPA 1972) ("Claims which are broad enough to read on obvious

subject matter are unpatentable even though they also read on nonobvious subject

matter.") During prosecution, applicant can amend to limit the claims to statutory subject

matter.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill
in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),
the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions
covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37
CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later
invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35
U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant**

Admitted Prior Art (AAPA) in view of **Wilt et al.** (US 20030140179 A1).

As to claim 1:

AAPA teaches a method for processing command information, the method comprising: detecting a real time event; and causing commands in a real time event command buffer to be fetched and consumed in response to the real time event (see pp.5-6 and Figs. 1-2 and the associated text).

While teaching command buffer (command buffer 106; Fig.1), AAPA is silent on a real time event command buffer.

Wilt teaches the use of a real time event command buffer (see ¶¶0010-0012 and 0102-0112).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA with Wilt because Wilt's teaching would have provided the capability for effectively managing computational resources of coprocessors in a computing system.

As to claim 2:

AAPA teaches providing an event selector signal to a comparator; providing a plurality of event signals to the comparator; and generating an event detection signal when an event signal is equivalent to an event selector signal (see Figs. 1-2 and the associated text).

As to claim 3:

AAPA teaches providing the commands in the real time event command buffer to be

processed by a command processor (see Figs. 1-2 and the associated text).

As to claim 4:

AAPA teaches the real time event includes a system command from a system command

buffer processed by a command processor, the method further comprising: first

consuming all of the commands within the event command buffer; and in response to

processing all of the commands of the event command buffer, processing a next system

command within the system command buffer (see Figs. 1-2 and the associated text).

Refer to the discussion of claim 1 above regarding a real time command buffer.

As to claim 5:

AAPA teaches detecting a second real time event; and causing commands in a second

command buffer to be fetched and consumed in response to detecting the second real

time event (see Figs. 1-2 and the associated text). Refer to the discussion of claim 1

above regarding a second real time command buffer.

As to claim 6:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches providing system commands to a command processor from a system command

buffer detecting a real time event; fetching commands in an event command buffer in response to the real time event; providing the commands in the event command buffer to the command processor; and consuming the real time event commands by the command processor (see pp.5-6 and Figs. 1-2 and the associated text).

As to claim 7:

AAPA teaches providing an event selector signal to a comparator; providing a plurality of event signals to the comparator; and generating an event detection signal when an event signal is equivalent to an event selector signal (see Figs. 1-2 and the associated text).

As to claim 8:

AAPA teaches fetching the system commands from the system command buffer; in response to detecting a real time event, pausing the fetching of the system commands; and upon the processing of all the real time event commands in the real time event command buffer, resuming the fetching of system commands from the system command buffer (see Figs. 1-2 and the associated text).

As to claim 9:

AAPA teaches detecting a second real time event; fetch commands in a second real time event command buffer; providing the commands of the second real time event command buffer to the system processor; and consuming the second real time event commands by

the system processor (see Figs. 1-2 and the associated text).

As to claim 10:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches loading a real time event into a real time event detector; providing a system

command from a system command buffer to a command processor; detecting a real time

event; fetching commands in the event command buffer; providing the commands of

event command buffer to the system processor; and consuming the real time event

commands by system processor (see pp.5-6 and Figs. 1-2 and the associated text).

As to claim 11:

AAPA teaches providing an event selector signal to a comparator; providing a plurality

of event signals to the comparator; and generating an event detection signal when an

event signal is equivalent to the event selector signal (see Figs. 1-2 and the associated

text).

As to claim 12:

AAPA teaches loading a second real time event into the real time event detector (see

Figs. 1-2 and the associated text).

As to claim 13:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches a command processor for processing system commands from a system command

buffer; a real time event engine which monitors a plurality of event signals for a real time

event; and an event command buffer, containing a plurality of real time event commands,

operably coupled to the real time event engine, wherein when the real time event occurs,

the real time event commands are fetched and consumed by the command processor (see

pp.5-6 and Figs. 1-2 and the associated text).

As to claim 14:

AAPA teaches the first real time event engine comprises: a real time event detector

comprising: an event table containing an event selector; a comparator operably coupled to

the control register for receiving the event selector; and a plurality of engines providing

the plurality of event signals to the comparator wherein the comparator compares the

plurality of event signals to the event selector and produces an event detection signal

when an event signal matches the event selector (see Figs. 1-2 and the associated text).

As to claim 15:

AAPA teaches the event table further contains a command buffer pointer and a length of

command buffer field wherein the command buffer pointer points to a command buffer

and the length of command buffer field provides the number of commands within the

command buffer (see Figs. 1-2 and the associated text).

As to claim 16:

AAPA teaches one of the engines is a three-dimensional video graphics engine (see Fig. 2 and the associated text).

As to claim 17:

AAPA teaches the event table is stored in a local command processor memory (see Figs. 1-2 and the associated text).

As to claim 18:

AAPA teaches a real time event controller which programs the real time event detector with the real time event selector for the detection of the real time event (see Figs. 1-2 and the associated text).

As to claim 19:

AAPA teaches a second real time event engine which monitors the monitors the commands provided to the command processor for a second real time event; and a second real time event command buffer, containing a plurality of second real time events commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the second real time commands are fetched and consumed by the command processor (see Figs. 1-2 and the associated text).

As to claim 20:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches a command processor for processing system commands from a system command

buffer; a first real time event engine which monitors a plurality of event signals for a first

real time event; a first event command buffer, containing a plurality of first real time

event commands, operably coupled to the first real time event engine, wherein when the

first real time event occurs, the processing of the system commands is paused and the

first real time event commands are fetched and consumed by the command processor; a

second real time event engine which monitors the plurality of event signals for a second

real time event; and a second event command buffer, containing a plurality of second real

time event commands, operably coupled to the second real time event engine, wherein

when the second real time event occurs, the processing of commands by the command

processor is paused and the second real time event commands are fetched and consumed

by the command processor (see pp.5-6 and Figs. 1-2 and the associated text).

As to claim 21:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches the first real time event engine comprises a first real time event detector having a

first event selector and a first comparator which receives the first event selector; the

second real time event engine comprises a second real time event detector having a

second event selector and a second comparator which receives the second event selector;

and a plurality of engines operably coupled to the first comparator and the second

comparator, whereupon when one of the event signals matches the first event selector, a

first event detection signal is produced by the first comparator and when one of the event

signals matches the second event selector, a second event detection signal is produced by

the second comparator (see pp.5-6 and Figs. 1-2 and the associated text).

As to claim 22:

AAPA teaches one of the plurality of engines is a three dimensional graphics engine (see

and Fig. 2 and the associated text).

As to claim 23:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches a first real time event engine which monitors a plurality of event signals for a first

real time event; and a first event command buffer, containing a plurality of first real time

event commands, operably coupled to the first real time event engine, wherein when the

first real time event occurs, the processing of the system commands is paused and the

first real time event commands are fetched and consumed by the command processor (see

pp.5-6 and Figs. 1-2 and the associated text).

As to claim 24:

The rejection of claim 1 above is incorporated herein in full. Additionally, AAPA

teaches a second real time event engine which monitors the plurality of event signals for

a second real time event; a second event command buffer, containing a plurality of

second real time event commands, operably coupled to the second real time event engine,

wherein when the second real time event occurs, the processing of commands by the

command processor is paused and the second real time event commands are fetched and

consumed by the command processor (see pp.5-6 and Figs. 1-2 and the associated text).

As to claim 25:

AAPA teaches the second real time event of the second real time event engine is

programmed by the first real time event engine (see pp.5-6 and Figs. 1-2 and the

associated text).

Conclusion

6.   The prior art made of record, see PTO 892, and not relied upon is considered pertinent to

applicant's disclosure. Applicant should review these references carefully before

responding to this office action.

Contact Information

7.   Any inquiry or a general nature or relating to the status of this application should
be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to VAN H. NGUYEN whose telephone number is (571)
272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM-

6:00PM. The examiner can also be reached on alternative Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM THOMSON can be reached at (571) 272-3718.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://padirect.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
Commissioner for patents
P O Box 1450
Alexandria, VA 22313-1450

VAN H. NGUYEN
PRIMARY EXAMINER